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Product datasheet for TP302701L

Insulin (INS) (NM_000207) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human insulin (INS), 1 mg
Species:	Human
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>RC202701 protein sequence Red=Cloning site Green=Tags(s) MALWMRLLPLLALLALWGPDPAAAFVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGG GPGAGSLQPLALEGSLQKRGIVEQCCTSICSLYQLENYCN TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Predicted MW:	9.3 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Bioactivity:	Cell treatment (PMID: 28417915)
Preparation:	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_000198
Locus ID:	3630
UniProt ID:	P01308, I3WAC9
RefSeq Size:	469

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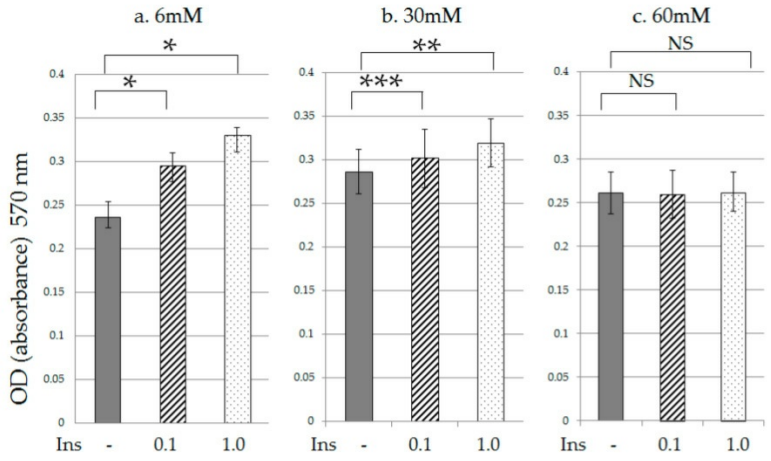
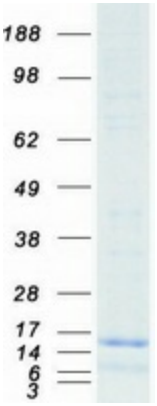
Cytogenetics:	11p15.5
RefSeq ORF:	330
Synonyms:	IDDM; IDDM1; IDDM2; ILPR; IRDN; MODY10; PNDM4
Summary:	This gene encodes insulin, a peptide hormone that plays a vital role in the regulation of carbohydrate and lipid metabolism. After removal of the precursor signal peptide, proinsulin is post-translationally cleaved into three peptides: the B chain and A chain peptides, which are covalently linked via two disulfide bonds to form insulin, and C-peptide. Binding of insulin to the insulin receptor (INSR) stimulates glucose uptake. A multitude of mutant alleles with phenotypic effects have been identified, including insulin-dependent diabetes mellitus, permanent neonatal diabetes diabetes mellitus, maturity-onset diabetes of the young type 10 and hyperproinsulinemia. There is a read-through gene, INS-IGF2, which overlaps with this gene at the 5' region and with the IGF2 gene at the 3' region. [provided by RefSeq, May 2020]
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein
Protein Pathways:	Insulin signaling pathway, Maturity onset diabetes of the young, mTOR signaling pathway, Oocyte meiosis, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Regulation of autophagy, Type I diabetes mellitus, Type II diabetes mellitus

Product images:



The proliferation of HPDE-6 cells under high-insulin conditions. After 120 hours of culture under different concentrations of glucose (6, 30, and 60 mM), and insulin (OriGene [TP302701]) (0, 0.1, and 1 nM), the cell growth was assessed by the MTT assay. * $p < 0.001$; ** $p < 0.01$; *** $p < 0.05$; NS: non-significant. Figure cited from Int J Mol Sci, PMID: 28417915



Coomassie blue staining of purified INS protein (Cat# [TP302701]). The protein was produced from HEK293T cells transfected with INS cDNA clone (Cat# [RC202701]) using MegaTran 2.0 (Cat# [TT210002]).